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## THE IMPROVEMENT OF STUDENTS' CRITICAL THINKING THROUGH SOCRATIC QUESTIONING METHOD AT UNIVERSITY OF MUHAMMADIYAH SUMATERA

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### Abstract

*This research was carried due to the lack of students' critical thinking at English Education department of University of Muhammadiyah Sumatera Utara on speaking. Answering questions were approximately found more popular than asking questions. In response to that matter this research dealt with the application of Socratic questioning method in teaching speaking in order to improve the students' critical thinking. Socratic questioning is a method of learning with the conversation or debate confronted with a series of questions. Speaking materials were focused on updated hot issues happening in the world wide. The location of this research was University of Muhammadiyah Sumatera Utara (UMSU), Medan. The subject was 40 students of semester III by using action research. The result showed that Socratic questioning method was not only able to improve the students' speaking skill but also their critical thinking. Their self- confidence and knowledge background dealing with material were significantly improved. The data analysis showed that applying Socratic questioning method in teaching speaking needed process it was not enough to be conducted in one meeting only. It is strongly suggested to the speaking lecturers to increase the students' speaking ability by Socratic questioning method.*

**Keywords:** critical thinking, Socratic questioning, method, improvement



## **A. Introduction**

Speaking is a skill that should be achieved by the learner of language like English to show what he/she wants to through speaking up. The more practice will provide the students with intensive experience to the language situation. While being able to speak English in this respect English recognized as an international language is important because of the era of globalization that gives people unlimited contact with each other around the world where today more than a billion people use English through the media social or also face to face (Brown, 2001). Nowadays science and technology developments have rapidly changed the life style and global order. The students as agents of change however should be ready to confront the readiness and ability to face changes. The changes must be confronted by the good ability in problem solving. But its ability needs critical thinking skills. The characteristic of critical thinking is the ability to think logically and abstractly, and to reason theoretically (Paul, 1993; Paul and Elder, 2007). Socratic questioning is one of the most powerful methods to promote critical through dialogue from questioning between students and the teacher (Jones & Safrit, 1994; King, 1994; Paul 1993). A person who trains and disciplines his mind to think in a prescribed manner, consistently using the same set of procedures to guide that thinking, would be able to raise his standard of thinking. In the context of learning, this implies that students' critical thinking can be developed if teachers have the skill to conduct questioning and to ask appropriate questions.

Based on the observation conducted previously, the third semester students of English Education Department at University of Muhammadiyah Sumatera Utara, their critical thinking skills were still low. The facts were found that answering questions were more popular than asking questions, even almost no questioning activity among them during the lecture takes place. The time allocated for questioning was very little, not more than 10 minutes, sometimes not even given at all. Portraiture of learning like this was not caused entirely students error, which was often considered less bold, less confident, and less creative. Because the lecturers' self-evaluation was not done in term of how often



they asked questions to students either at the beginning, middle or end of the lecture, and whether the questions were able to encourage students to think critically or the questions asked were only at the remembering level, the lowest level in the latest version of taxonomy Bloom (Anderson & Krathwohl, 2001) thus it caused them not to think critically.

This study aimed to the applying of Socratic questioning method to improve the students' critical thinking at English Department University of Muhammadiyah Sumatera Utara. The significance of this research is practically having relation with improving the students' critical thinking in accordance with the development of spoken language communication activities.

## **B. Method**

The qualitative study sought to investigate the application of Socratic questioning method in improvement the students' critical thinking skill. This study was conducted as classroom action research. The qualitative data were taken by questionnaire, observation and diary notes. This research was conducted in one class exactly to 40 students. It was accomplished in two cycles. Every cycle consisted of four steps of action research. They were planning, acting, observing and reflecting. The first cycle including pre-test was conducted in four meetings. The second cycle was conducted in three meetings altogether. The students were recording their opinion at the end of each cycle. The schedule of Lessons and Data collection, Reflection and Intervention was shown below:

**Table 1**  
**The schedule of Lessons**

CYCLE I	Lesson	Topic	Speaking Tasks	Interview
	Lesson 1	Introduction to Critical Debate	Speaking Task 1	Interview 1
	Lesson 2	The Rule of Debate		
	Lesson 3	Debate		



Practice (1) and Socratic Questioning				
REFLECTION AND INTERVENTION				
CYCLE II	Lesson 4	Debate Practice (2) and Socratic Questioning	Speaking Task 2	Interview 2
	Lesson 5	Debate Practice (3) and Socratic Questioning		
	Lesson 6	Debate Practice (4) and Socratic Questioning		
REFLECTION AND INTERVENTION				
OVERALL ANALYSIS				

The assessment of critical thinking applied for this research was assessed through the speaking tasks assigned to them at each cycle of the study. This was to gain insight into their reasoning and quality of thinking rather than the quantity of the information

### **C. Research Findings**

The results of the study were shown in qualitative and quantitative data. The improvement by applying Socratic questioning method in teaching speaking was seen in cycle II. The mean of the students from the pre-test, Cycle I and Cycle II was as follows:



**Table 2**  
**Table of Students' Score in Pre-test, Cycle I and Cycle II**

No	Students' Initial	Pre-Test	Cycle I				Cycle II			
			1	2	3	Mean	1	2	3	Mean
1	AS	40	56	68	72	65,33	82	88	95	88,33
2	AW	56	56	62	70	62,66	70	85	90	81,66
3	BF	70	76	78	79	77,66	90	95	100	95,00
4	CPA	62	65	69	74	69,33	78	86	92	85,33
5	EL	72	76	80	80	78,66	90	95	100	95,00
6	FS	65	68	72	73	71,00	78	86	92	85,33
7	FDP	62	65	66	66	65,66	76	78	90	82,66
8	ITH	64	70	74	76	73,33	84	95	100	93,00
9	IMS	73	78	80	80	79,33	88	95	100	94,33
10	IC	40	54	58	66	59,33	72	84	90	82,00
11	IR	73	78	80	80	79,33	90	95	100	95,00
12	KAR	70	76	78	80	78,00	90	95	100	95,00
13	KS	56	68	68	74	70,00	84	90	95	89,66
14	LI	54	56	64	72	64,00	78	87	94	86,33
15	LP	40	56	62	68	62,00	70	85	94	83,00
16	LM	73	78	78	79	78,33	84	90	95	89,66
17	MRR	43	58	66	69	64,33	75	85	90	83,00
18	NP	66	70	74	76	73,33	80	88	92	86,66
19	NS	40	58	64	70	64,00	70	85	90	81,66
20	NIR	55	64	68	74	68,66	82	90	95	88,66
21	PSP	60	70	75	78	74,33	86	95	100	93,66
22	R	48	56	60	62	59,33	70	84	90	81,33
23	RE	48	68	70	73	70,33	82	90	95	89,00
24	RP	70	78	78	80	78,66	90	95	100	95,00
25	RSD	73	76	78	80	78,00	90	95	100	95,00
26	RW	40	60	68	74	67,33	84	92	96	90,66
27	RW	48	54	56	62	57,33	72	84	90	82,00
28	RA	68	74	79	80	77,66	84	90	95	89,66
29	RK	60	73	76	76	75,00	80	90	100	89,33



30	SP	48	58	64	68	63,33	76	84	90	83,33
31	SOP	58	70	80	80	76,66	89	95	100	94,66
32	SH	70	78	79	80	79,00	90	95	100	95,00
33	SZ	56	68	68	76	70,66	82	88	96	88,66
34	SR	48	66	69	76	70,33	80	88	96	88,00
35	SIR	40	56	62	66	61,33	72	80	90	80,66
36	TS	48	64	68	76	69,33	84	90	95	89,66
37	TL	70	76	78	78	77,33	85	90	95	90,00
38	WJAS	46	66	69	74	69,66	84	90	95	89,66
39	WL	60	68	69	72	69,66	82	88	96	88,66
40	ZDMS	48	50	58	62	56,66	72	78	84	78,00
$\sum X$		2.251	2.655	2.813	2.951	2806,19	3.245	3.558	3.797	3533,2
$\bar{X}$		56,27	66,37	70,32	73,77	70,15	81,12	88,95	94,92	88,33

Table 3  
 Table of Improvement Students Score

No	Students Initial Name	Pre-test	Cycle I	Cycle II	Improvement Score
1	AS	40,00	65,33	88,33	23,00
2	AW	56,00	62,66	81,66	19,00
3	BF	70,00	77,66	95,00	17,34
4	CPA	62,00	69,33	85,33	16,00
5	EL	72,00	78,66	95,00	16,34
6	FS	65,00	71,00	85,33	14,33
7	FDP	62,00	65,66	82,66	17,00
8	ITH	64,00	73,33	93,00	19,67
9	IMS	73,00	79,33	94,33	15,00
10	IC	40,00	59,33	82,00	22,67
11	IR	73,00	79,33	95,00	15,67
12	KAR	70,00	78,00	95,00	17,00
13	KS	56,00	70,00	89,66	19,66



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14	LI	54,00	64,00	86,33	22,33
15	LP	40,00	62,00	83,00	21,00
16	LM	73,00	78,33	89,66	11,33
17	MRR	43,00	64,33	83,00	18,67
18	NP	66,00	73,33	86,66	13,33
19	NS	40,00	64,00	81,66	17,66
20	NIR	55,00	68,66	88,66	20,00
21	PSP	60,00	74,33	93,66	19,33
22	R	48,00	59,33	81,33	22,00
23	RE	48,00	70,33	89,00	18,67
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25	RSD	73,00	78,00	95,00	17,00
26	RW	40,00	67,33	90,66	23,33
27	RW	48,00	57,33	82,00	24,67
28	RA	68,00	77,66	89,66	12,00
29	RK	60,00	75,00	89,33	14,33
30	SP	48,00	63,33	83,33	20,00
31	SOP	58,00	76,66	94,66	18,00
32	SH	70,00	79,00	95,00	16,00
33	SZ	56,00	70,66	88,66	18,00
34	SR	48,00	70,33	88,00	17,67
35	SIR	40,00	61,33	80,66	19,33
36	TS	48,00	69,33	89,66	20,33
37	TL	70,00	77,33	90,00	12,67
38	WJAS	46, 00	69,66	89,66	20,00
39	WL	60, 00	69,66	88,66	19,00
40	ZDMS	48,00	56,66	78,00	21,34
<b><math>\sum x</math></b>		<b>2.251</b>	<b>2806,19</b>	<b>3533,2</b>	
<b><math>\bar{X}</math></b>		<b>56,27</b>	<b>70,15</b>	<b>88,33</b>	



**Table 4**  
**Table of Students' Score from the First until Last Meeting**

Test	Students' Score got 70 points	Percentage
Pre-test	10	25%
First Cycle	22	55%
Second Cycle	40	100%

#### **D. Discussion**

The result of the research indicated that there was an improvement on the students' critical thinking by applying Socratic questioning method. After collecting data, the mean of the pre-test was still low (56.27) and then it was done cycle I. After doing the action by applying demonstration method in cycle I, the result of the first had increased from the pre-test (70.15). Then, after giving action in cycle II, the result of the second competence test had increased significantly from cycle I (88.33). The students were rather difficult to provide better reasoned responses in their speaking tasks under the aspects of the Elements of reasoning. They had difficulties on providing reasoned response under the elements of assumptions, Inference and Conclusion. In this cycle then Socratic Questioning was postponed due to problem of speaking and students had anxiety towards it and they did not display any significant effort in reasoning. Moreover they showed more than occasional lapses in reasoning and could not provide appropriate reasons under the aspect of Information (did not cite appropriately or sufficiently from the text), assumptions were not addressed and there was no clear link between the conclusion and the points were still low in the speaking task. Then in cycle II, the students fared much better in reasoning and showed only slight lapses in reasoning. The conclusion given was better than the previous cycle. Students showed the improvement in tying up the points raised in their conclusion speech. Their point of view had been clear and substantial supported by the right evidences. The development and the pace of development of critical were significantly improved. Significantly Socratic questioning method was not only able to improve





the students' speaking skill but also their critical thinking. Their self-confidence and knowledge background dealing with material were significantly improved. However it needed process because it was not enough to be conducted in one meeting only.

## E. Conclusion

After analyzing the data, conclusions are drawn as follow: firstly, there is a significant improvement of the students' critical thinking when they were taught by applying Socratic questioning method. Having analyzed the data presented in the previous chapter the mean of the students significantly improved: pre-test (56.27), Cycle I (70.15), Cycle II (88.33). From the qualitative data through the interview showed that in cycle I, the development in students' critical thinking was assessed through students' ability to provide reasoned responses in their speaking tasks, over consistent verbal classroom practice in Socratic Questioning. Last it was concluded that applying Socratic questioning method in teaching speaking was effective as it could improve the students' critical thinking.

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